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antheridiol. $C_{29}H_{42}O_5$.

Properties: Colorless, fine crystals; mp 250C; slightly soluble in water, soluble in warm methanol.

Use: A plant hormone having a specific sex function, it is secreted by certain water molds. It has been used to modify plant fertility. Said to be the first plant sex hormone to be discovered (1942).

anthocyanin. A flavonoid plant pigment which accounts for most of the red, pink, and blue colors in plants, fruits, and flowers. Water-soluble.

See also flavonoid.

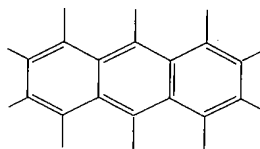
"Anthomine."³⁰⁰ TM for a dyeing assistant primarily for use in wool dyeing.

anthophyllite. $(Mg,Fe)_7Si_8O_{22}(OH)_2$. A natural magnesium-iron silicate.
See asbestos.

anthracene. CAS: 120-12-7.

$C_{14}H_{10}$.

Properties: Yellow crystals with blue fluorescence. Soluble in alcohol and ether, insoluble in water, d 1.25 (27/4C), mp 217C, bp 340C, fp 250F (121C) (CC). Combustible. It has semiconducting properties.



Derivation: (a) By salting out from crude anthracene oil and draining. The crude salts are purified by pressing and finally by the use of various solvents. Phenanthrene and carbazole are removed; (b) by distilling crude anthracene oil with alkali carbonate in iron retorts, the distillate containing only anthracene and phenanthrene. The latter is removed by carbon disulfide.

Method of purification: By sublimation with superheated steam or by crystallization from benzene followed by sublimation; for very pure crystals, zone melting of solid anthracene. Impurities: Phenanthrene, carbazole, and chrysene.

Grade: Commercial (90-95%), pure crystals.

Hazard: A carcinogen.

Use: Dyes, alizarin, phenanthrene, carbazole, anthraquinone, calico printing, a component of smoke screens, scintillation counting crystals, organic semi-conductor research.

anthracene oil. A coal-tar fraction boiling in the range 270-360C, a source of anthracene and sim-

ilar aromatics. Also used as a wood preservative and pesticide, except on food crops.
Hazard: A carcinogen.

1,8,9-anthracenetriol. See anthralin.

anthracite. See coal.

anthragallic acid. See anthragalloyl.

anthragalloyl. (1,2,3-trihydroxyanthraquinone; anthragallic acid). $C_6H_4(CO)_2C_6H(OH)_3$. Tricyclic.

Properties: Brown powder. Soluble in alcohol, ether, glacial acetic acid, slightly soluble in water and chloroform. Sublimes at 290C.

Derivation: Product of the reaction of benzoic, gallic, and sulfuric acids.

Use: Dyeing.

"Anthragen."²⁰³ TM for a series of lake colors. Used for printing inks, wallpaper, coated paper, paint, rubber, and organic plastics.

"Anthralan."²⁰³ TM for a series of acid dye-stuffs. Used on wool.

anthralin. (1,8,9-anthracenetriol; 1,8-dihydroxyanthranol). $C_{14}H_{10}O_3$.

Properties: Odorless, tasteless, yellow powder. Mp 176-181C. Filtrate from water suspension is neutral to litmus. Soluble in chloroform, acetone, benzene, and in solutions of alkali hydroxide; slightly soluble in alcohol, ether, and glacial acetic acid; insoluble in water. Combustible.

Derivation: By catalytic reduction of 1,8-dihydroxyanthraquinone with hydrogen at high pressure.

Grade: NF, (95%).

Hazard: Very irritating. Do not use on scalp or near eyes.

Use: Medicine (treatment of psoriasis).

anthranilic acid. (o-aminobenzoic acid).

CAS: 118-92-3. $C_6H_4(NH_2)(CO_2H)$.

Properties: Yellowish crystals; sweetish taste; soluble in hot water, alcohol, and ether. Mp 144-146C, sublimes. Combustible.

Derivation: Phthalimide plus an alkaline hypobromite solution.

Grade: Technical (95-98%), 99% or better.

Use: Dyes, drugs, perfumes, and pharmaceuticals.

anthranol. (9-hydroxyanthracene).

$C_{14}H_9OH$.

Properties: Crystals, mp 120C, soluble in organic solvents with a blue fluorescence. Changes in solution to anthrone. Combustible.

Use: Dyes.